Geopolitical Shocks and Inflation

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ECB Forum on Central Banking - July 2, 2024

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**Geopolitical Risks and Inflation**

- Geopolitical risk: threat, realization, and escalation of adverse events associated with wars, terrorism, and any tensions among political actors that affect peaceful course of international relations.

- Will highlight link between higher geopolitical risk and inflation ($\pi$) using cross-country historical data and global time-series, monthly data.

  1. Supply and trade disruptions, commodity prices ($\pi \uparrow$)
  2. Monetary & fiscal policy responses ($\pi \uparrow$)
  3. Adverse effects on confidence and aggregate demand ($\pi \downarrow$)
Index of geopolitical risks constructed using mentions in international newspapers of wars and adverse geopolitical events. Last observation: June 2024. Data at https://www.matteoiacoviello.com/gpr.htm
The Geopolitical Risk Index across Countries

Eastern Europe, Middle East sources of geopolitical risk in last year

Heat Map of Global Geopolitical Risks.
Geopolitical Risk and Inflation over time

Relationship between Geopolitical Risk and inflation weakened in the 1980s-1990s, but became strong again in last 20 years

Binned scatterplots of relationship between country-specific geopolitical risk index and changes in inflation.
Transmission Channels

Following increase in country-specific geopolitical risk...

- Decline in international trade and supply disruptions (shortages)
- Public spending, public debt, money supply increase
**Why Does Inflation Rise? Supply and Demand**

- Absent supply-side effects (fix trade and shortages)
  → smaller inflation rise, smaller GDP drop

- Absent policy response (fix public spending and money supply)
  → smaller inflation rise, larger GDP drop
**Russian Invasion Scenario: Global Effects**

- Use monthly data on global macro and financial variables since 1970 to take closer look at recent events
- Simulate shock to global geopolitical risk of magnitude seen in 2022
- Shock estimated to have reduced global GDP and boosted global inflation

Simulated effects over time on world GDP and inflation of Russia-Ukraine shock. Shaded areas indicate 90 percent confidence intervals.
**Russian Invasion Scenario: Transmission**

- Rise in inflation accompanied by lower consumer confidence, tighter financial conditions, higher commodity prices.
- Lower confidence and tighter financial conditions point to additional channel that could mitigate adverse inflationary effects.

Blue dots show the estimated peak effects of a Russia-Ukraine-sized shock (dashed lines show 90% confidence intervals). All variables expressed in percent deviation (except for confidence in standard deviation units) from baseline.
Conclusions

• Inflation rises in the aftermath of geopolitical shocks

• Magnitude of the effects reflect variety of forces
  • adverse effects on supply chains, trade, commodity markets
  • size of policy responses
  • reverberations of shock on financial markets and business and household sentiment
APPENDIX
Country-Specific Geopolitical Risk Indexes

Germany

Israel

Russia

China

Korea

Mexico

Country-Specific Geopolitical Risk. Scale proportional to news coverage for each country
Global Shortages

- Shortages News Index: newspaper articles related to supply-based scarcity, including shortages, rationing, bottlenecks.

Note: Indexes are standardized to have zero mean and unit standard deviation in each country.
**Geopolitical Risk and Inflation since 2022**

*Note: Geopolitical Risks and Inflation since 2022 in a cross-section of countries*
Geopolitical Risk and Inflation Expectations in the U.S.

Note: Scatter plots of the relationship between Geopolitical Risk and University of Michigan Survey of Inflation Expectations.
Geopolitical Risks since 1900

Index: 1985-2019=100. Index shown combines data from the Historical and from the Recent Series. Source: Caldara and Iacoviello (2022)